ARG70331
Human FGFR2 recombinant protein (Active) (ECD) (Fc-His-tagged, C-ter)

Package: 100 µg
Store at: -20°C

Summary

Product Description	HEK293 expressed, Fc-His-tagged (C-ter) Active Human FGFR2 recombinant protein (ECD).
Tested Reactivity	Hu
Tested Application	Binding, FuncSt, SDS-PAGE
Target Name	FGFR2 (ECD)
Species	Human
A.A. Sequence	Arg22 - Glu377 of Human FGFR2 (NP_000132.3) with an Fc-6X His tag at the C-terminus.
Expression System	HEK293
Activity	Active
Activity Note	Measured by its ability to inhibit FGF-acidic dependent proliferation of Balb/c 3T3 mouse fibroblasts. The ED50 for this effect is typically 0.256-0.991 ng/ml.
Alternate Names	CD antigen CD332; BEK; Keratinocyte growth factor receptor; K-SAM; ECT1; FGFR-2; KGFR; JWS; TK14; CFD1; BBDS; TK25; K-sam; CEK3; Fibroblast growth factor receptor 2; EC 2.7.10.1; CD332; BFR-1

Application Instructions

Application Note	Binding activity test: Measured by its binding ability in a functional ELISA. Immobilized Recombinant Human FGF1 at 5µg/ml (100 µl/well) can bind Recombinant Human FGFR2 with a linear range of 0.8-2.5 µg/ml.

Properties

Form	Powder
Purification Note	0.22 µm filter sterilized. Endotoxin level is 97% (by SDS-PAGE)
Buffer	PBS (pH 7.4)
Reconstitution	Reconstitute to a concentration of 0.1 - 0.5 mg/ml in sterile distilled water.
Storage instruction	For long term, lyophilized protein should be stored at -20°C or -80°C. After reconstitution, aliquot and store at -20°C for up to one month, at 2-8°C for up to one week. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	FGFR2
Gene Full Name	fibroblast growth factor receptor 2
Background	The protein encoded by this gene is a member of the fibroblast growth factor receptor family, where

	amino acid sequence is highly conserved between members and throughout evolution. FGFR family members differ from one another in their ligand affinities and tissue distribution. A full-length representative protein consists of an extracellular region, composed of three immunoglobulin-like domains, a single hydrophobic membrane-spanning segment and a cytoplasmic tyrosine kinase domain. The extracellular portion of the protein interacts with fibroblast growth factors, setting in motion a cascade of downstream signals, ultimately influencing mitogenesis and differentiation. This particular family member is a high-affinity receptor for acidic, basic and/or keratinocyte growth factor, depending on the isoform. Mutations in this gene are associated with Crouzon syndrome, Pfeiffer syndrome, Craniosynostosis, Apert syndrome, Jackson-Weiss syndrome, Beare-Stevenson cutis gyrata syndrome, Saethre-Chotzen syndrome, and syndromic craniosynostosis. Multiple alternatively spliced transcript variants encoding different isoforms have been noted for this gene. [provided by RefSeq, Jan 2009]
Function	Tyrosine-protein kinase that acts as cell-surface receptor for fibroblast growth factors and plays an essential role in the regulation of cell proliferation, differentiation, migration and apoptosis, and in the regulation of embryonic development. Required for normal embryonic patterning, trophoblast function, limb bud development, lung morphogenesis, osteogenesis and skin development. Plays an essential role in the regulation of osteoblast differentiation, proliferation and apoptosis, and is required for normal skeleton development. Promotes cell proliferation in keratinocytes and immature osteoblasts, but promotes apoptosis in differentiated osteoblasts. Phosphorylates PLCG1, FRS2 and PAK4. Ligand binding leads to the activation of several signaling cascades. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate. Phosphorylation of FRS2 triggers recruitment of GRB2, GAB1, PIK3R1 and SOS1, and mediates activation of RAS, MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling pathway, as well as of the AKT1 signaling pathway. FGFR2 signaling is down-regulated by ubiquitination, internalization and degradation. Mutations that lead to constitutive kinase activation or impair normal FGFR2 maturation, internalization and degradation lead to aberrant signaling. Over-expressed FGFR2 promotes activation of STAT1. [UniProt]
Calculated Mw	92 kDa
PTM	Autophosphorylated. Binding of FGF family members together with heparan sulfate proteoglycan or heparin promotes receptor dimerization and autophosphorylation on several tyrosine residues. Autophosphorylation occurs in trans between the two FGFR molecules present in the dimer. Phosphorylation at Tyr-769 is essential for interaction with PLCG1. N-glycosylated in the endoplasmic reticulum. The N-glycan chains undergo further maturation to an Endo H-resistant form in the Golgi apparatus. Ubiquitinated. FGFR2 is rapidly ubiquitinated after autophosphorylation, leading to internalization and degradation. Subject to degradation both in lysosomes and by the proteasome. [UniProt]
Cellular Localization	Cell membrane. Golgi apparatus. Cytoplasmic vesicle. Note=Detected on osteoblast plasma membrane lipid rafts. After ligand binding, the activated receptor is rapidly internalized and degraded. Isoform 1: Cell membrane. Note=After ligand binding, the activated receptor is rapidly internalized and degraded. Isoform 3: Cell membrane. Note=After ligand binding, the activated receptor is rapidly internalized and degraded. Isoform 14: Secreted. Isoform 19: Secreted. [UniProt]

Images

Human FGFR2
recombinant protein (ECD)
(Fc-His-tagged, C-ter)

ARG70331 Human FGFR2 recombinant protein (Active) (ECD) (Fc-His-tagged, C-ter) SDS-PAGE image

SDS-PAGE analysis of ARG70331 Human FGFR2 recombinant protein (Active) (ECD) (Fc-His-tagged, C-ter).